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Central New York's 1968 migrant summer school programs were sampled and evaluated on the basis of meeting Crewson's objectives as stated in 1967: (1) improvement of self-concept; (2) development of language ability and vocabulary; (3) development of social and academic skills; (4) expansion of cultural experiences; and (5) establishment of sound health and nutritional habits. Individual children, schools, teachers, and parents provided data related to each objective. Although assessment was limited in the areas of classroom interaction scales, parent interviews, and achievement testing, it was felt that the summer school programs were successful, particularly in reading and arithmetic. Suggestions were made for correcting these limitations and for studying ways of aiding teachers. (SW)

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Final Report

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EVALUATION OF MIGRANT SUMMER SCHOOL PROGRAMS

SUPPORTED BY THE NEW YORK STATE DEPARTMENT OF EDUCATION

DURING 1968

Principal Investigator:_____Date_____

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Abstract

Evaluation of Migrant Summer School Programs

Supported by the New York State Department of Education

During 1968

Principal Investigator: V. James Garofalo, Syracuse University

Using Crewson's objectives (1967) for migrant programs as goals, this study looked at a sample of 1968 migrant summer school programs in Central New York. A random selection of 12 schools and of 49 students was made for evaluation.

The questions asked by this study were how well did the investigated schools meet each of Crewson's objectives: for each migrant child,

1. Improvement of self-concept
2. Development of social and academic skills
3. Development of language ability and vocabulary
4. Expansion of cultural experiences
5. Establishment of sound health and nutritional habits.

Data related to each objective were gathered from individual children, schools and teachers, and parents of the selected children. Some difficulty was experienced in using the classroom interaction scales, in interviewing the parents, and in obtaining accurate achievement test scores from the schools. Within these assessment limitations, the summer school programs can be viewed as successful. It is felt that progress was made towards meeting every objective. Especially well documented were the gains made in the areas of reading and arithmetic. Rates of learning averaged 150% (reading) and 230% (arithmetic) of average national expectancy.

Suggestions for further studies and modification of difficult assessment areas were made.

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Members of the research project
Mrs. Anitia Jackson - parent interviewer
Mr. Russell Post - parent interviewer
Mr. James Blake - research assistant
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Characteristic # 6	Teacher Talk:	Direct Influence: Giving Directions
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Characteristic # 8	Student Talk:	Response
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Each year, within the State of New York, farmers employ thousands of migratory workers, who are United States citizens, to assist in the harvest of their fruit and vegetable crops. Between five and eight thousand school-age children enter New York State as a part of the migrant worker groups.

New York State Labor laws allow children between the ages of twelve and fourteen to work for half a day in the fields. Children over fourteen years of age are classed as adult laborers. Those children who are too young to work, either accompany their parents to the field or remain in the camps. They have virtually no adult supervision or guidance. Because the harvest season begins in late April or early May and continues into November, the children have incomplete school attendance in their winter (or homebase) schools. Their parents have a limited education. The parents seldom have reading material in the camp. Coupled with the long work day, the adults are not usually able to serve as useful models of readers for their children. Thus, we find migrant children with incomplete school attendance, limited contact with adults and virtually no academic stimulation outside the school. Compensatory educational programs are needed if these children are to receive an education that will give them a chance to choose some other way of life. In an effort to provide needed educational programs, the Migrant Division of New York State Department of Education provides yearly support for local six week summer school programs for the children of migrant workers.

This report describes an evaluation of the programs, attitudes, and academic gains of children involved in the 1968 migrant summer school programs. A sampling of migrant summer school programs and children in the agricultural areas north and west of Albany was made.

Development of the Problem

Background For This Study

Researchers (Bagley, 1933; Cromer, 1940; Crowell, 1928; Finney, 1936; Huus, 1945; Larson, 1940; Munz, 1936; Parker, 1938; Sackett, 1935; Tetreau and Fuller, 1942; Turner, 1938) conclude that constant travel and exposure to a variety of schools were among the significant factors that affected students' performances. Students, whose parents travelled because of job reassignment by the company or the government, scored higher than resident children on a variety of tests of academic skills. Students, whose parents travelled because of seasonal agricultural work, scored lower than resident children on a variety of tests of academic skills. Therefore, factors other than constant travel and exposure to a variety of schools must effect migrant children's poor academic performance. Their environment is a major factor to consider.

Migrant children, because of their incomplete school attendance, limited contact with adults, and the minimal amount of academic stimulation, are part of the disadvantaged group. Black (1966), Deutsch (1963), Lewis (1966), and Riessman (1962) have pointed out the effects of environment upon young disadvantaged students. Using school measures of educational abilities, disadvantaged students generally score lower in tests of readiness and language, and have a different learning pattern. In the area of readiness, the disadvantaged have gaps in knowledge, skills, and are unaccustomed to receiving approval for success. They lack the experiences and vocabulary around which school readiness work is begun. Their speaking vocabulary by second grade is a third of the normal school vocabulary. By sixth grade their speaking vocabulary is only half of that expected.

The learning pattern of disadvantaged children is characterized by a lack of imagination (in a middle-class sense); by use of concrete over abstract

modes of learning; and by a poor attention span. His behavior lacks the finesse of handling school rules, motivation toward work, and school tests in a manner given high value by school authorities. The child finds his accomodation to the school advocated role frequently alien to his way of life. The anti-intellectual attitude mentioned by these researchers appears to be more of a rejection of the behavior demanded of the child, than of real rejection of intellectual activity, per se.

A final factor to consider, in addition to constant travel, exposure to a number of different schools and the child's environment, is the consistency of instruction. The level and manner of instruction provided in each school along the route that the child attends would effect his academic development. Also the attitude of the schools toward the roles they play in migrant children's lives would directly influence the children. Problems of measurement related to classroom settings were considered by Gallo (1967), whose study was on a population unrelated to this study, drew some conclusions that are important. He concluded that previous studies measuring teacher's performances in the classroom had little success in discriminating between good and poor teaching, but that it is possible to describe with some accuracy the activities within classrooms using objective interation matracies.

Huus used interesting questioning techniques to examine parent and student attitudes. This study followed her ideas of parent and student questioning. The three wishes question, as a source of worry and concern, and the three classmates questions, as a measure of peer adjustment, were used and analyzed as developed by Huus.

Since 1956, the New York State Education Department has been developing educational programs for children of migratory workers between the ages of five and fourteen. Two evaluations of their summer school programs have been made.

Nyquist (1965) report of the New York State's migrant summer program was composed of background information and a collection of teacher's evaluative statements. The statements in the report were generally laudatory of the summer's work.

Crewson (1967) listed the objectives of the state's migrant program (in order of importance) as: For each migrant child

1. Improvement of self-concept
2. Development of social and academic skills
3. Development of language ability and vocabulary
4. Expansion of cultural experiences
5. Establishment of sound health and nutritional habits.

Note that the Crewson Report was limited to careful evaluation of objectives two and three. The Crewson Report was the first to use standardized achievement measures. Reading and arithmetic sub-scores were reported (pre- and post-program) on over a thousand students (pre-kindergarten to 10th grade). The Wide Range Achievement Test (WRAT) was used. Generally, slight gains were found.

There has yet to be a comprehensive evaluation of all these objectives in the state-wide migrant program, or of the cumulative effect of interstate programs on the migrant children.

Statement of the Problem

This study represents the first effort to systematically evaluate the full set of objectives (Crewson, 1967) for migrant summer school programs. This study does not get into the area of cumulative effects of interstate school programs on migrant children. The five Crewson objectives are listed below along with the procedures used to gather information related to each area. The objectives thus become the major questions of this study, i.e., How well did

the investigated migrant summer school programs meet each objective.

1. Improvement of the child's self-concept
   a. The selected children interviews at the beginning and end of the summer program;
   b. Teacher's comments and reactions about the children and the program; and
   c. Parent interviews at the beginning and end of the program, were gathered.
2. Development of social and academic skills
   a. The selected students' pre and post standardized test scores;
   b. The student interviews pre and post-program;
   c. Observed student classroom behavior;
   d. Teachers' comments and reactions to the students; and
   e. Representative samples of materials used in the classroom were collected.
3. Development of language ability and vocabulary
   a. Taperecordings of the classroom language during instruction and free time;
   b. Comparisons between interview language and classroom language were to be made; and
   c. Representative samples of materials used in the classroom were collected.
4. Expansion of cultural experiences
   a. Proposals for funding were examined for activities related to cultural enrichment; and
   b. School visitations that included discussions about cultural experiences that children were having.
5. Establishment of sound health and nutritional habits

a. Representative samples of materials used in the classroom;

b. Teachers' comments and reactions; and

c. School visitations.

Population and Procedures For This Study

In order to collect the data listed above, twelve migrant summer schools were randomly selected from the twenty-four located north and west of Albany. (Twelve were selected because it was felt to be a reasonable number to handle during the six week program.) Capital letters A through L are used to represent the twelve schools in the data collections that follow.

From the twelve schools, four were randomly chosen in which weekly observations of students could be made. In each school, annual migrant children who considered "home" to be somewhere in Florida were identified. (Annual Florida migrants were selected because a follow-up study in the winter schools was planned for the winter of 1968 and spring of 1969.) The students identified as annual Florida migrants formed the population from which the student sample was made. No attempt was made to include students who enrolled after the first week and a half of classes. Four of the children who were in kindergarten, four who were in primary grades (1-3) and four who were in intermediate grades (4-6) were randomly selected from each of the four schools to form the student sample. Except that in one school, the kindergarten and primary classes were combined and had only nine students, so all nine children involved were observed and studied. This selection provided a total student sample of 49.

Numbers 1 through 49 represent the students in the data collections that follow.

For the selected schools, student sample, and parents of selected students, the following procedures were utilized to gather the information listed above

in the statement of the problem section. At the beginning of the summer school the selected students were interviewed in the schools and asked these questions:

1. What kind of a student are you?
2. How do you know?
3. What is your best subject?
4. How do you know?

The responses to question 1 were classified as positive, negative, or neutral. The responses to questions 2 and 4 were divided as follows: teacher/grades, family, self, don't know. For question 3 the responses were tabulated into reading, arithmetic and other specific activities.

Each student was given the "First Grade Reader Screening Test." (FGRT) Those students who could read the sentences on this test were given the Gilmore Oral Reading Test (Gil). Those who could not read the sentences, and recognized less than 10 sight words, were given the Goodenough Draw-A-Man Test (DAM). The reading level of students who could not read the sentences on the FGRT was designated as readiness. Students who could read the sentences were designated as 1.0 grade level. The students who were able to score on the Gilmore were given the grade level they attained on the test.

A weekly, six minute in classroom observation was made on the student sample. A modification of the Flanders Matrix was used to characterize classroom activity. (See Appendix E for detailed explanation of matrix and modifications). Students who were absent, or on a field trip during the weekly visitation were not observed for that particular week.

Each school's proposal for funds was studied prior to the school visit, to learn about the various aspects of each school's program in terms of the Crewson scale. The study was explained to the administrator and the faculty in each of the twelve schools. Then, the interviewing of the teachers, in terms of what were their reactions to the children and the summer migrant pro-

gram, and the collection of a representative sample of materials used in the classroom were begun.

The parents of the selected children who consented were interviewed by special parent interviewers. They were asked the following questions:

1. Does your child attend summer school?
2. Have you ever visited the school?
3. What does the school do with your child all day?
4. Is there anything you would like to see added or changed in school?
5. Why do you send your children to school?

Responses to questions number 1 or 2 were either yes or no. Question 3 responses were ~~categorized as~~ in categories of, no response, little or no knowledge, and very knowledgeable. Little or no knowledge were those responses that did not indicate any reference to specific activities of the child in the school. "He plays and sleeps" would be classified as little or no knowledge. "He plays in The Gingerbread Boy and marches," or "He is studying 'take away'" would be considered very knowledgeable. Question 4 responses were labelled either, no or yes, with the changes desired listed. Question five responses were divided into, specific positive advantages, specific negative advantages, neutral or polite responses. An example of a positive response would be "So that she can learn to add." A negative response would be those in which attending school was used as a punishment. Neutral or polite responses were vague statements of "doing better" without any indication of how or what.

During the middle part of the summer school programs, the student classroom observations, the teacher interviews, and the material collections continued.

At the end of the summer programs, the students were interviewed again and asked these questions:

5. What have you learned in summer school?
6. How do you know?
7. If you had three wishes what would you wish?
8. What is your favorite story? Tell it to me.
9. Why do you like the story?
10. What three classmates would you pick to work with in class? in camp?
11. What three classmates would you pick to play with in class? in camp?

The responses to questions five and six were compared to the responses to questions one through four (gathered at the beginning of the programs). The comparisons were between positive and negative opinions, and sources of judgement. Question seven was analyzed in the same manner used by Huus (1945). The responses were placed in one of eight categories. Each category was then a potential source of worry or concern to the child. Questions eight and nine were used as a measure of language development. The language used in telling the story and explaining why the story was liked was to be compared with classroom language. The responses to questions ten and eleven were processed in the same manner Huus (1945) used. From this analysis the degree of peer adjustment was estimated, as part of the development of social skills. WRAT pre and postprogram scores were collected from the schools. These WRAT scores were used as a measure of academic skill development.

The interviews of teachers and the material collection was completed. The materials were examined to learn the content of instruction, in what manner it was taught to the students, and its readability level.

The parents were interviewed a second time and were asked the same questions as during the first interview. A comparison was made of these responses with the first interview responses.

Results

This section will display the data gathered in the survey and present it using the same format as developed in the Statement of the Problem section.

1. Data bearing on the improvement of the child's self concept.

   A. Student interviews.

Table I

Students' Interview (Responses)

Preprogram

Question	Responses		
	Positive	Negative	Neutral
1. What kind of student are you?	31	5	13
	Reading	Math	Specific
3. What is your best subject	4	8	37

	Source of Judgment			
	Teacher/grades	Family	Self	Don't Know
2. How do you know?	20	2	10	17
4. How do you know?	12	1	16	20

Postprogram

Question	Responses				
	Reading	Math	Other Sub.	Nothing	Don't Know
5. What have you learned in school?	5	13	19	8	3

	Source of Judgment			
	Teacher/grades	Family	Self	Don't Know
6. How do you know?	11	0	10	28

During the post interviews the students talked at greater length about their ability, or lack of it, in specific academic areas. However, their source of judgment was more indefinite than in the pre-program interviews.

B. Teacher interviews.

Teachers may have seen the self-concepts of their children improve, however, their remarks in the interviews and questionnaires dwelled on the child's social and academic adjustments, to the exclusion of self-concept improvement.

C. Parent interviews.

The parents had little first hand knowledge of the school program. Twenty-three percent had visited the school: however, all were employed at the school, so their visits were not solely out of concern for the child's academic program. This left 77% who had not visited the school.

Sixteen percent indicated they were aware of what the school was doing with their child, and 84% who did not know or had little idea what the children were doing in school.

Ninety percent of the parents had no suggestions for additions or changes in the current educational program. The other 10% wanted the schools to run into September, so they could continue to work in the fields. Thus, there were no academic or social suggestions made by the parents.

Twenty-three percent of the parents felt the school had a negative effect on their child. In each case it resulted from corporal punishment inflicted upon the child which resulted in hostility and anger, rather than modified behavior. Ten percent felt the school had a positive effect, because of the enthusiasm the child displayed for school and school activities. Sixty-seven percent hoped the school had a good

effect on their children, but did not know whether in fact it did.

2. Data bearing on the development of academic and social skills.

A. Gains in standard scores on the WRAT.

	Mean	S.D.
Reading	2.2 months	1/10 of a month
Arithmetic	3.4 months	1/5 of a month

B. Student interviews.

Three wishes:

School	14
Home	11
Don't want to wish	11
Fantasy	1
Vocation	1
Things	61
Weather, travel, war	0

Playmates:

18 chose three people to play with in school different from the ones they chose to play with in camp
11 chose two different people
8 chose one different person
1 would play by himself
3 chose the same people in camp and school
3 did not know the names of the students they would pick

Workmates:

19 chose three people to work with in school different from the three people chosen to work with from their camp
7 chose two different people
6 chose one different person
3 would work by themselves
2 chose the same people in camp and school
8 either did not know the students' names or would not answer

C. Observed Student Classroom Behavior.

Table 2

Classroom Behavior Correlated to Reading Gains

Modified Flanders Characteristic	Mean Frequency *	S.D. **	r ***
" # 1 (Accepts Feelings)	.3	.0	-.11
" # 2 (Praises, Encourages)	1.1	1.4	-.13
" # 3 (Accepts or Uses Ideas of Students)	.2	.0	-.02
" # 4 (Asks Questions)	4.8	1.8	+.70
" # 5 (Lectures)	.2	.0	-.07
" # 6 (Gives Directions)	5.7	1.3	-.40
" # 7 (Criticizes or Justifies Authority)	1.8	1.2	+.36
" # 8 (Student Response)	34.7	15.3	+.18
" # 9 (Student Initiation)	20.2	14.8	+.20
" #10 (Silence or Confusion)	12.7	7.6	+.25

* Mean Frequency: the average number of times this characteristic appeared in a six-minute observation

** S.D.: standard deviation of the mean frequency

*** r = Pearson Product Momment Correlation Coefficient: measure of a positive or negative linear relationship between gains in reading and characteristic of classroom behavior.

D. Teachers' comments and reactions to students and the program.

Many teachers felt the students were beginning to show social adjustment in terms of speaking up in class and working together in group activities.

Most teachers commented about special subjects (art, music, home economics, shop, reading, gym, health, library) as important in the school program. However, the teachers differed in how much time should be spent in special subjects, and in how to coordinate the classroom and special subject instruction. Many wanted more classroom time to develop reading and arithmetic instruction. This was particularly true where children spent a total of one hour a day in the classroom.

Many teachers felt the student/teacher ratio should be smaller than the maximum 15/1, in order that each child get individual instruction several times a day.

A few teachers felt that students should be allowed to keep many of the books they used in the summer.

The flexibility of the program and opportunity for individualizing instruction was highly praised by almost every teacher interviewed.

E. Materials used in the classrooms.

The samples of classroom materials gathered throughout the programs provided the following information.

Of all the classroom materials inspected:

49% were used for Reading instruction;

39% were used for Arithmetic instruction; and

12% were used for Social Studies and all other subjects.

Based on classroom observations and teacher comments, the materials were used in the classrooms as follows:

79% of time, Whole group instruction;

16% of time, Individual instruction; and

5% of time, Supplemental to regular instruction program.

Table 3 presents the relationship between the reading difficulty of the classroom materials and the reading levels of the students using them.

Table 3

Readability of classroom materials and reading levels of students

Material Readability	Student Reading Levels in relation to Materials (percentage of students in materials)		
	Lower(too hard)	at level	Higher(too easy)
Readiness	0	85	15
First Grade	27	55	18
Second Grade	0	40	60
Third Grade	0	0	100
Fourth Grade	20	20	60
Average	9	40	51

A student was into easy material if his reading score on the Gilmore Oral Reading Test was at the next grade level or higher, than the readability grade level of the sample materials he used in his classroom. A student was in too difficult material if his reading level was a grade below or lower, than the readability grade level of the sample materials he used in his classroom. This would not apply to students who read their

own experience stories. The Flesch and Dale-Chall readability formulas were used.

3. Data bearing on the development of language ability and vocabulary.

A. Tape recordings of the classroom language during instruction and free time.

It was impossible to tape a normal classroom because of the distraction the tape recorders made upon the students and classrooms.

B. Comparison between interview language and classroom language.

The comparisons between interview sessions and classroom language could not be made, since the recordings were not completed.

Student responses to questions 7 and 8.

7. What is your favorite story? Tell it to me.

11 wouldn't answer
8 did not know any stories
11 pre-school stories
- The Three Bears (3)
- Little Red Riding Hood (2)
- Gingerbread Boy (2)
- The Three Pigs
- Mary Had a Little Lamb
- Old Mother Hubbard
- Rumplestiltskin

2 class reader
3 television serials
14 trade books
- Mysteries (ghosts) (3)
- Boat books (2)
- Stories about dogs and cats (Lassie Come Home) (2)
- Space stories
- Fire Engine stories
- Fighting with bears
- Mary Poppins
- Curious George
- Cowboy Sam
- Rules of a game

8. Why do you like the story?

3 I like action
28 Don't know
18 Wouldn't answer

C. Materials from the classroom

Reading was taught by the experience method, the sequential phonetic skills instruction, or both.

4. Data bearing on the expansion of cultural experiences.

A. Proposals for funding

3 schools developed a program in which every class and special teacher developed a single school wide theme over a week, each week of school

8 schools had traditional classroom instruction programs with several special teachers and weekly field trips

1 school had a traditional self-contained classroom with no special teachers and two field trips for the summer

all 12 touched on all five of Crewson's guidelines in some way

B. School Visitations

Every school made field trips, which were considered by the schools as "cultural experiences". The variety of places visited ranged from the local grocery store to an ultra-modern synagogue.

5. Data bearing on establishment of sound health and nutritional habits.

A. Representative sample of materials used in the classroom

Every school had dittoed sheets on caring for the teeth. Some Schools had materials on personal hygiene and diet.

B. Teachers' comments and reactions

Teachers in every school highly praised the meal program in terms of providing both breakfast and lunch. It was criticized by some for not allowing children to have as many seconds as the children wished. One teacher praised the serving of food family style, over the more common practice of cafeteria line meals. Many bemoaned the cutting out of snacks toward the end of the program, due to the exhaustion of the snack budget.

C. School Visitation

Every school had either a parttime or fulltime nurse. All had meal programs, some had breakfast, two snacks and lunch. Many schools had health kits that included such items as soap, a comb, washcloth, towel, hair shampoo, toothbrush, and toothpaste. Many teachers had visual aids scattered about the room that illustrated toilet and sink skills. Some schools had home economic instructors on a parttime basis.

Limitations to Data Collection.

Parents' responses to the interview questions were limited by the fact that they had little knowledge of the school programs. Many of their responses represented polite answers.

Tape recording in-class activities proved impossible. The machines never reached a stage of low stimulus value. Comparisons of language used in the classroom with that used in free time and interviews could not be carried out.

Interpretation

The evaluation of the New York State Summer School Programs indicates that every school did attempt to develop their programs around each of Crewson's Guidelines.

Data related to the first guideline, improvement of the child's self concept, indicates that more students had definite opinions about what they could or could not do at the end of the program. Their reasons for knowing were still either not known or based only on teacher evaluations. This illustrates an improvement in terms of self-esteem, but continues to be based on less mature sources of judgment.

Parents had so little knowledge of the school program that most of them did not report changes in their children's self esteem. For those parents who reported negative changes (23%), it was found that corporal punishment had been

used on the child. The punishment did not appear to modify the child's behavior, but made him and his parents more hostile and angry. The 10% of the parents who reported positive self-esteem changes, talked of their child's enthusiasm for school and of his pride in his school achievements.

Examination of the data related to Crewson's second guideline, development of academic and social skills, is encouraging. The gain scores on the WRAT were tabulated directly from the pre and post-test scores reported by the schools. The average reading gain was almost 150% of what is expected of normal American children over a six week period (ie, 2.2 months gain in 1.5 months time.). The average arithmetic gain was almost 230% of what is expected of the norming population over a six week period (ie 3.4 months gain in 1.5 months time).

There is some reason for concern for the WRAT scores as reported, because of possible clerical errors in recording the scores. Some students' pre-test scores that were given to the researchers during the summer, when teacher interviews were being carried on, appeared in the post-test score column, when the school made out the complete lists.

The students' responses to the three wishes question would indicate that material goods are the single, largest source of worry and concern to them. Choices of playmates and workmates indicate that over half of the children have adjusted to their school peers. It should be kept in mind that in most cases the classmates are other migrant children or recently settled migrant children.

With one exception, there was very little correlation between the children's observed classroom behavior and the gains in reading. The one exception was the characteristic "Indirect Teacher Influence: asks questions." It is possible that this characteristic allows the teacher to know whether the student understands her directions.

Teachers' comments were more often made about social adjustment than about academic skills. This is due in part to their dissatisfaction with the WRAT, which does not measure social adjustment. The use of special teachers was described by most classroom teachers as having a definitely positive effect upon the children. Teachers were often quick to express a desire for more in-class time for reading and arithmetic instruction, and to reduce the teacher student ratio. They felt these two factors would allow the student to increase his level of academic skill. The lack of reading material outside the school prompted some teachers to suggest that books be allowed to be kept by the children after the summer program.

The flexibility of the program allowed the teachers to develop their instruction around the needs of the children. From the examination of the materials used in the classroom, it is quite clear that the teachers were allowed to use their sensitivity to the children's needs: they developed the bulk of the classroom instruction material. Commercial materials were used for individualized and reading readiness work rather than a full program.

In some cases students were reading material too easy for them. For example, a student was expected to read fourth grade level material, when his measured level was at the junior to senior high school range. (His teacher raved about what a smart boy he was, but never gave him more challenging material to read.)

Crewson's third guideline, development of language ability and vocabulary was only partially evaluated. The classroom tape recordings were not made due to the disruptive nature involved in taping. Future studies might attempt covert taping, more overt taping - so the process would not be so novel -, or alternately some unobtrusive techniques not involving taping might be employed.

Responses by the students to question seven indicate they had a limited

knowledge of stories. It was clear that they had not personally read any of the stories. All were either told to them, or seen on television. Ninety-four percent of the students didn't know why they liked the stories they reported.

A comparison of students' experience stories with their telling of favorite stories, reveals that most children used more words in their experience stories. (The two exceptions spent six or seven minutes orally describing a story, while their experience stories were never more than a few sentences.)

Expansion of cultural experiences, the fourth Crewson Guideline, was touched on by all schools. Each school's staff used "field trips" and "cultural experience" interchangeably. All schools had at least two field trips, most had one-a-week. Many activities by the school were "first-time" experiences for the children. These could be called cultural experiences and would include activities such as riding a pony, making popcorn, or ice cream, or costumes.

The fifth Crewson Guideline, establishment of sound health and nutritional habits, was carried out in many ways. All schools gave formal instruction about caring for the teeth. Some schools had special teachers to lead the instruction in health and nutrition, others had the classroom teacher develop this information. Most had some version of a health kit, around which instruction was carried on, and health habits started or continued.

All schools had meal programs of some kind for the children. A school nurse was employed in every school (either on a parttime or fulltime basis.) Almost all schools had medical exams for the children, and some had dental services.

Summary and Implications for Further Study

The migrant summer school programs evaluated can be viewed as succesful in attempting to meet the Crewson objectives for such programs. Given the data collection limitations of this study, it is felt that progress was made towards meeting every objective. Particularly well documented are gains in traditional reading and arithmetic instruction where rate of learning averaged 150 to 230% of average national expectancy.

Three areas of concern provide suggestions for further studies: evaluation devices and techniques; parent information; and teacher development.

Continued use of evaluators not directly involved in the school programs is seen as most helpful. Extension of the scope and control of the eveluation process and the data by the evaluation team is seen as necessary to ensure accuracy of test administration, scoring, and transcription. The use of a standardized, objective measure (s) is felt to be most valuable, however, consideration could be given to replacing the WRAT with some measure(s) which would provide more sensitivity to the levels and skills of actual concern in the summer programs. Improvement in the assesment of classroom interactions, oral language sampling, and self-esteem estimates is clearly required. Refinements of the techniques attempted in this study could be coupled with the introduction of new assessment approaches to these areas.

Obtaining information from the parents was difficult both because the interviewing procedure produced so little information (even though the interviewers were well accepted) and because the parents usually had had very little contact with or information about the school upon which to base their remarks. Refinement of the interviewing process and an active parent information program by the school appear to be the next logical steps in this area.

Although the teachers, as such, were not the subject of this study, their importance in the schools' effectiveness is clear. The attempts to be respon-

sive to student needs and the full measure of energy expended can only be to the teacher's credit. In order to further help the teachers it is felt that regular times for sharing of ideas and materials between teachers, regular times for preparing instructional materials, regular visitations by the principals to share impressions and to offer teaching suggestions, and scheduled pre or inservice programs related to increasing sensitivity to classroom interactions and the development of self-esteem by the students would all be helpful.

BIBLIOGRAPHY

1. Ausubel, D. P.; Pearl Ausubel "Ego Development Among Segregated Negro Children" in A. H. Passow (ed) EDUCATION IN DEPRESSED AREAS New Yo York: Teachers College Press, 1963, 109-141.

2. Bagley, William C. "The Mobility of the Population As A Factor in School Efficiency" EDUCATIONAL ADMINISTRATION AND SUPERVISION (19), September, 1933, 473.

3. Black, Millard B. "Characteristics of the Culturally Disadvantaged Child" in Frost and Hawkes (ed) THE DISADVANTAGED CHILD New York: Houghton & Mifflin, 1966, 45-50.

4. Crewson, Walter THESE TOO ARE OUR CHILDREN Albany, N.Y.: Migrant Office - State Department of Education, December, 1967.

5. Cromer, Sturgeon THE EFFECT OF TRANSIENCY ON THE PROGRESS AND ACHIEVEMENT OF ELEMENTARY SCHOOL PUPILS OF GLOBE Tucson: University of Arizona, 1940, unpublished manuscript.

6. Crowell, Edwin Ambrose COMPARATIVE STUDY OF TRANSIENT CHILDREN IN FLORIDA Nashville: George Peabody College for Teachers, 1928, unpublished manuscript.

7. Dale, Edgar and Jeanne S. Chall A FORMULA FOR PREDICTING READABILITY Ohio State University: Bureau of Education Research, 1948.

8. Deutsch, Martin "The Disadvantaged Child and the Learning Process" in A. H. Passow (ed) EDUCATION IN DEPRESSED AREAS New York: Teachers College Press, 1963, 163-179.

9. Finney, Gladys Cline A COMPARATIVE STUDY OF RELATIVE ACHIEVEMENT OF ENGLISH AND SPANISH TRANSIENT AND NON-TRANSIENT 6TH GRADE GROUPS Tucson: University of Arizona, 1936, unpublished manuscript.

10. Flesch, Rudolf THE ART OF READABLE WRITING New York: Harper and Brothers, 1949.

11. Huus, Helen "Factor Associated with the Reading Achievement of Children from a Migratory Population I, II" THE ELEMENTARY SCHOOL JOURNAL (45) 203-212, 276-285.

12. Larson, Emil L. "Migration and Its Effect on Schools" THE ELEMENTARY SCHOOL JOURNAL (41) December, 1940, 283-297.

13. Lewis, Oscar LA ~~VIDA~~ VIDA New York: Random House, 1966.

14. Munz, Martin TRANSCIENCY AND ITS RELATION TO THE PROGRESS OF PUPILS Tucson: University of Arizona, 1936, unpublished manuscript.

15. Nyquist, Ewald B. THE RICHER MEANING OF THE MIGRANT LABOR PROGRAM Albany, N.Y.: Migrant Office - State Department of Education, November, 1965.

16. Parker, Vilas TRANSCIENCY IN RELATION TO SCHOOL PROGRESS AND ACHIEVEMENT IN CLIFTON, ARIZONA Tucson: University of Arizona, 1938, unpublished manuscript.

17. Riessman, FrankTHE CULTURALLY DEPRIVED CHILD New York: Harper & Row, 1962.

18. Sackett, Everett B. "The Effects of Moving on Educational Status of Children" THE ELEMENTARY SCHOOL JOURNAL (35), March, 1935, 517-526.

19. Tetreau, E. D.; Varden Fuller "Some Factors Associated with the School Achievement of children in Migrant Families" THE ELEMENTARY SCHOOL JOURNAL (42), February, 1942, 423-431.

20. Turner, Ruth TRANSIENCY OF THE 8TH GRADE PUPILS IN SIXTEEN SELECTED SCHOOLS OF MARICOPA COUNTY Tucson: University of Arizona, 1938, unpublished manuscript.

21. Walker, Helen M. and Joseph Lev ELEMENTARY STATISTICAL METHODS (revised edition) New York: Holt, Rinehart and Winston, 1958.

APPENDIX A

GAINS IN STANDARD SCORES FROM THE PRE AND POST WIDE RANGE ACHIEVEMENT TESTS BY SCHOOLS

SCHOOL	READING	ARITHMETIC
A	.13*	.49**
B	.22	.44
C	.26	.26
D	.40	.40
E	.15	.41
F	.30	.22
G	.20	.27
H	.14	.12
I	.23	.38
J	.29	.24
K	.28	.23
L	.11	.44
M	.25	.25

* .13 = a gain of one and three tenths months
** .49 = a gain of almost five months

APPENDIX B

First Grade Reader Screening Test developed by Durkin

NAME_ SCHOOL_ _ _ _ _ _ _ _ _ _ _ _ _ _ _

said	to	down	jump
mother	for	big	house
red	it	in	blue
want	father	here	we
can	is	work	away
help	stop	little	ball
get	and	funny	you
the	come	play	see
look	make	me	go
			not

The ball is red.
Come and look.
Come and see the ball.
It is not big.
It is little and red.
Mother said it is for me.

APPENDIX C

READING STANDARD SCORES GAINS ON WRAT FOR SELECTED STUDENTS

Coded Name	Gains in standard score (grade)
1	1.2*
2	1.2
3	.8
4	.6
5	.6
6	.6
7	.6
8	.5
9	.5
10	.5
11	.5
12	.3
13	.3
14	.3
15	.3
16	.3
17	.2
18	.2
19	.2
20	.2
21	.2
22	.2
23	.1
24	.1
25	.1
26	.1
27	.1
28	.1
29	.1
30	.1
31	.1
32	.1
33	.1
34	.1
35	.0
36	.0
37	.0
38	.0
39	.0
40	.0
41	-.1**
42	-.2
43	-.3
44	-.4
45	-.5
46	No post test
47	No test reported
48	No test reported
49	No test reported
	Mean = .22

*1.2 = one year, two months
**-.1 = one month loss

APPENDIX D

ARITHMETIC STANDARD SCORE GAINS ON THE WRAT FOR SELECTED STUDENTS

Coded Name	Gains in standard score (grade)
32	1.7*
18	1.5
19	1.2
22	1.2
2	1.1
7	1.1
16	.9
30	.8
15	.7
29	.7
5	.6
28	.6
45	.5
35	.4
1	.4
6	.4
34	.4
24	.3
25	.3
4	.3
27	.3
14	.3
31	.3
9	.3
11	.3
12	.3
23	.2
17	.2
13	.2
20	.2
21	.2
38	.1
26	.1
3	.0
33	.0
41	.0
40	.0
30	.0
37	.0
42	-.2**
43	-.3
44	-.4
8	-.6
10	-.7
39	-.8
49	No scores reported
46	No scores reported
47	No scores reported
48	No scores reported
	Mean = .34

*1.7 = one year, seven months gain
**-.2 = two month loss

APPENDIX E

TEACHER TALK: INDIRECT INFLUENCE: 1. Accepts Feelings

STUDENT CLASS-ROOM BEHAVIOR

There is no scale implied by these numbers. Each number is classificatory, it designates a particular kind of communication event. To write these numbers down during observation is to enumerate, not to judge a position on a scale.

Teacher Talk

Indirect Influence

1. ACCEPTS FEELING: accepts and clarifies the feeling tone of the students in a nonthreatening manner. Feelings may be positive or negative. Predicting or recalling feelings are included.

Modification: this number designated when the teacher accepted the feelings of the observed child as an individual, or as a member of a group.

Coded Names	Average Frequency Characteristic Appeared During Six Minute Observations
34	5
11	1.2
1	1.0
46	1.0
16	.8
23	.8
42	.7
43	.7
7	.7
18	.6
17	.5
22	.4
41	.4
All the rest	.0
	Mean = .3

APPENDIX E

TEACHER TALK: INDIRECT INFLUENCE: 2. Praises (Encourages)

STUDENT CLASS-ROOM BEHAVIOR

There is no scale implied by these numbers. Each number is classificatory, it designates a particular kind of communication event. To write these numbers down during observation is to enumerate, not to judge a position on a scale.

Teacher Talk

Indirect Influence

2. PRAISES OR ENCOURAGES: praises or encourages students action or behavior. Jokes that release tension, not at the expense of another individual. Nodding head or saying, "um-hm?" or "go on" are included.

Modification: This was used when the observed child was praised individually or performed the task for which the group was being praised.

Coded Names	Average Frequency Characteristic Appeared During Six Minute Observations
6	5
32	5
37	4
46	4
49	3.6
34	3
43	3
11	2.8
12	2.3
16	2
15	2
22	1.6
23	1.6
19	1.5
21	1.3
42	1.3
10	1.0
17	1.0
3	1.0
41	1.8
18	.8
7	.7
20	.7
29	.7
33	.6
40	.5
36	.5
26	.5
25	.4
8	.4
35	.4
1	.3
All the rest	0
	Mean = 1.1

APPENDIX E

TEACHER TALK: INDIRECT INFLUENCE: 3. Accepts or Uses Ideas of Students

STUDENT CLASS-ROOM BEHAVIOR

There is no scale implied by these numbers. Each number is classificatory, it designates a particular kind of communication event. To write these numbers down during observation is to enumerate, not to judge a position on a scale.

Teacher Talk

Indirect Influence

3. ACCEPTS OR USES IDEAS OF STUDENT: clarifying building, or developing ideas suggested by a student. As teacher brings more of his own ideas into play, shift to category five.

Modification: applied to observed student's ideas only.

Coded Names	Average Frequency Characteristic Appeared During Six Minute Observations
46	3.5
21	1.3
24	1.2
12	.7
42	.7
6	.7
7	.7
35	.6
15	.5
32	.5
18	.4
34	.4
All the rest	0
	Mean = .2

APPENDIX E

TEACHER TALK: INDIRECT INFLUENCE: 4. Asks Questions

STUDENT CLASS-ROOM BEHAVIOR

There is no scale implied by these numbers. Each number is classificatory, it designates a particular kind of communication event. To write these numbers down during observation is to enumerate, not to judge a position on a scale.

Teacher Talk

Indirect Influence

4. ASKS QUESTIONS: asking a question about content or procedure with the intent that a student answer.

Modification: applies to observed student when he was asked a closed ended question, i.e. "How many children can work at the sink at one time, Ellis?"

Coded Names	Average Frequency Characteristic Appeared During Six Minute Observations	Coded Names	Average Frequency Characteristic Appeared During Six Minute Observations
2	20.7	26	1.2
12	20.3	35	1.2
19	19.0	10	1.0
37	16.8	15	1.0
18	14.0	38	.8
46	11.5	20	.7
6	10.7	13	.7
28	10.3	42	.7
32	9.6	9	0
3	9.0	27	0
49	8.4	14	0
34	6.8	29	0
16	6.4	30	0
39	5.2	31	0
22	4.8	47	0
11	4.8	43	0
24	4.6	36	0
48	4.5	44	0
23	4.4		Mean = 4.8
17	4.3		
4	4.2		
7	4.0		
33	3.6		
40	3.5		
41	2.8		
1	2.7		
21	2.7		
8	2.0		
25	2.0		
43	1.3		
45	1.2		

APPENDIX E

TEACHER TALK: DIRECT INFLUENCE: 5. Lecturing

STUDENT CLASS-ROOM BEHAVIOR

There is no scale implied by these numbers. Each number is classificatory, it designates a particular kind of communication event. To write these numbers down during observation is to enumerate, not to judge a position on a scale.

Teacher Talk:

Direct Influence

5. LECTURING: giving facts or opinions about content or procedure, expressing his own ideas, asking rhetorical questions.

Modification: when the teacher was doing this specifically to the observed student or to the group in which the student was expected to be a part.

Coded Names	Average Frequency Characteristic Appeared During Six Minute Observations.
33	2.2
17	2.0
47	1.3
41	.8
2	.7
28	.7
42	.7
32	.5
25	.5
34	.4
All the rest	0.0
	Mean = .2

APPENDIX E

TEACHER TALK: DIRECT INFLUENCE: 6. Giving Directions

STUDENT CLASS-ROOM BEHAVIOR

There is no scale implied by these numbers. Each number is classificatory, it designates a particular kind of communication event. To write these numbers down during observation is to enumerate, not to judge a position on a scale.

Teacher Talk:

Direct Influence

6. GIVING DIRECTIONS: directions, commands, or orders to which a student is expected to comply.

Modification: when directions were given specifically to observed student or a group in which the student was a part.

Coded Name	Average Frequency Characteristic Appeared During Six Minute Observations
12	20
32	14.8
19	12.3
22	10.8
1	10
18	10
37	9.3
43	9.3
21	9.3
45	9
44	8.7
20	8.7
21	8.5
23	8.4
11	8
2	7.7
46	7.5
24	6.4
34	6.2
3	6
4	5.8
25	5.6
49	5.4
14	5.3
41	5
16	4.8
36	4.5
35	4.4
39	4.4
13	4.3
40	4.3
6	4
7	3.7
26	3.5
43	3
10	3
8	2.8
33	2.8
42	2.7
38	2.3
48	2
28	2
30	1.5
15	1
47	.7
29	.7
9	0
27	0
31	0

Mean = 5.7

APPENDIX E

TEACHER TALK: DIRECT INFLUENCE: 7. Criticizing or Justifying Authority

STUDENT CLASS-ROOM BEHAVIOR

There is no scale implied by these numbers. Each number is classificatory, it designates a particular kind of communication event. To write these numbers down during observation is to enumerate, not to judge a position on a scale.

Teacher Talk:

Direct Influence

7. CRITICIZING OR JUSTIFYING AUTHORITY: statements intended to change student behavior from nonacceptable to acceptable pattern; bawling someone out; stating why the teacher is doing what he is doing; extreme self-reference.

Modification: when this was done specifically to observed child or group in which observed child was a part.

Coded Names	Average Frequency Characteristic Appeared During Six Minute Observations
31	25.5
28	7.7
19	5.5
30	4.0
49	3.4
2	3.3
23	3.2
38	3
17	3
14	2.7
25	2.6
12	2
37	2
10	2
22	1.8
9	1.7
35	1.6
32	1.5
27	1.3
13	1.3
44	1.3
47	1.3
16	1.
43	1.
24	.8
8	.8
18	.8
3	.8

Coded Names	Average Frequency Characteristic Appeared During Six Minute Observations
1	.7
43	.7
20	.7
36	.5
4	.4
34	.4
All the rest	0
	Mean = 1.8

APPENDIX E

STUDENT TALK: 8. Response

STUDENT CLASS-ROOM BEHAVIOR

There is no scale implied by these numbers. Each number is classificatory, it designates a particular kind of communication event. To write these numbers down during observation is to enumerate, not to judge a position on a scale.

Student Talk:

8. STUDENT TALK - RESPONSE: talk by students in response to teacher. Teacher initiates the contact or solicits students statement.

   Modification: applied only when observed student was asked an open ended question, i.e. "How would you solve this problem, Lucy?"

Coded Names	Average Frequency Characteristic Appeared During Six Minute Observations	Coded Names	Average Frequency Characteristic Appeared During Six Minute Observations
1	60		
26	58.8	17	25.5
2	58.7	29	25
47	57	6	23.3
33	55	40	22.7
49	52	34	22.6
8	51	14	21
45	49.8	13	20.7
20	49.7	7	20
39	47	15	17
35	46	10	16
46	45.5	16	12.2
3	45	27	11.7
44	44.7	28	11
48	43	38	7
36	42	30	2
43	41.5	31	1.5
11	41.4		Mean = 34.57
25	40.8		
23	40.6		
41	40.4		
42	40.3		
18	40		
32	39.8		
4	37.8		
43	37.7		
22	37.6		
19	37.5		
37	34.2		
24	34.2		
12	33.7		
21	29		
9	27		

APPENDIX E

STUDENT TALK: 9. Initiation

STUDENT CLASS-ROOM BEHAVIOR

There is no scale implied by these numbers, each number is classificatory, it designates a particular kind of communication event. To write these numbers down during observation is to enumerate, not to judge a position.

Student Talk:

9. STUDENT TALK - INITIATION: talk by students which they initiate. If "calling on" student is only to indicate who may talk next observer must decide whether student wanted to talk. If he did, use this category.

Modification: applied only when observed student voluntarily spoke out; either on his own or in response to another student, or when he was involved in independent work which was not meant to be disruptive.

Coded Names	Average Frequency Characteristic Appeared During Six Minute Observations
30	63
14	50.3
38	49.3
27	42
29	41
16	39.6
15	38
28	36.3
6	36
7	33.7
42	31
16	28.3
24	27.8
40	27.7
19	27
10	27
9	26.7
23	23
34	22.4
31	22
41	21.4
21	21.3
25	20.8
17	20.7
36	19.5
18	18.4
32	17.5
22	16.8
3	13.4

Coded Names	Average Frequency Characteristic Appeared During Six Minute Observations
4	11.6
8	11.2
11	11.2
12	10.7
43	10
39	9.6
20	8
48	7.5
44	7
26	6.7
47	6.3
35	5.8
46	5.5
49	5.0
37	4.7
1	2.0
33	1.6
2	.6
45	.4
5	0
	Mean = 20.3

APPENDIX E

10. Silence or Confusion

STUDENT CLASS-ROOM BEHAVIOR

There is no scale implied by these numbers. Each number is classificatory, it designates a particular kind of communication event. To write these numbers during observation is to enumerate, not to judge a position on a scale.

10. SILENCE OR CONFUSION: pauses, short periods of silence and periods of confusion in which communication cannot be understood by the observer.

Modification: when student indicated by his action he did not understand what he was to do; did not know what to do with his time; or purposely disrupted the class or individuals from its/their activities.

Coded Names	Average Frequency Characteristic Appeared During Six Minute Observations
37	27
6	26.3
16	24.8
46	24.8
5	24.5
10	24.5
14	23.3
28	23
17	22
5	21.2
9	20.7
44	19.7
13	18
34	16.8
7	16.3
31	16
27	15.3
45	15.2
38	14.7
43	13.7
15	13.3
39	12.6
23	12
8	11.8
22	11.8
11	11
2	11
19	10.8
48	10.7
35	9.6
18	9.4
25	9
20	9
32	8.8
21	8.7
24	8.6
33	8.4
12	5.7
3	5.6
29	4.7
46	4.5
47	3.7
30	3.5
41	3.2
26	2.5
49	2.4
36	1.5
2	0
42	0
	Mean = 12.7